

Does Exercise — Without Change in Diet — Lower Long-Term Risk for Diabetes?

Exercise without dietary change lowered diabetes risk by ≈50% in people with central obesity.

Diet and exercise together lower risk for developing type 2 diabetes. However, does exercise alone lower risk? In this study from China, researchers evaluated the long-term effects of a 12-month aerobic exercise intervention on risk for incident diabetes (defined as fasting glucose of ≥ 126 mg/dL, glycosylated hemoglobin [HbA_{1c}] $\geq 6.5\%$, or use of antidiabetes medication) in 220 adults with central obesity and nonalcoholic fatty liver disease (mean age, 54; mean baseline weight, 71 kg; mean waist circumference, 96 cm; mean HbA_{1c}, 6%).

Participants were randomized to 12 months of coached and supervised vigorous exercise, moderate exercise, or no exercise (controls) and were instructed not to change their diet. After the 12-month intervention (results of which were published previously; *JAMA Intern Med* 2016; 176:1074), participants were advised to maintain a healthy lifestyle and to exercise. During 10 years of follow-up, the incidence of type 2 diabetes was significantly lower in the vigorous- and moderate-exercise groups than in the control group (2, 2, and 4 cases per 100 person-years, respectively). Waist circumference and HbA_{1c} also were significantly lower in the exercise groups.

COMMENT

Certainly, a combination of healthful eating and exercise generally is preferable to exercise alone. Nevertheless, a short-term coached and supervised aerobic exercise intervention, without a change in diet, lowered risk for type 2 diabetes over the long term in this selected group of adults with central obesity.

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Chen Y et al. *Effect of moderate and vigorous aerobic exercise on incident diabetes in adults with obesity: A 10-year follow-up of a randomized clinical trial.* **JAMA Intern Med** 2023 Jan 30; [e-pub].
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